DOCUMENT RESUME

ED 060 184 VT 014 572

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TITLE	Applying an Occupational Classification to a Representative Sample of Work Histories.
INSTITUTION	Johns Hopkins Univ., Baltimore, Md. Center for the Study of Social Organization of Schools.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.
REPORT NO	Rep-119
PUB DATE	Nov 71
GRANT	OEG-2-7-061610-0207
NOTE	31p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Classification; Males; *Occupational Choice; *Predictive Validity; Predictor Variables; *Vocational Development; *Work Experience
IDENTIFIERS	*Holland Occupational Classification

ABSTRACT

To test the predictive efficiency of the Holland Occupational Classification and the related hypotheses concerned with occupational achievement and stability of career from Holland's theory of careers, the classification was applied to a national sample of 973 male retrospective work histories. Analyses were performed by organizing and reorganizing the work histories according to the classification. The classification appears to order lower level occupational histories in an efficient way, well beyond chance. Also, all three letters in the Realistic code appear to have predictive validity. The testing of the hypotheses from the theory suggests that the theory can be applied to both adult work histories and vocational choices of high school and college students. (Author/SB)

REPORT NO. 119

NOVEMBER, 1971

APPLYING AN OCCUPATIONAL CLASSIFICATION TO A REPRESENTATIVE SAMPLE OF WORK HISTORIES

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Grant No. OEG-2-7-061610-0207

Project No. 61610-07-05

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November, 1971

Published by the Center for Social Organization of Schools, supported in part as a research and development center by funds from the United States Office of Education, Department of Health, Education, and Welfare. The opinions expressed in this publication do not necessarily reflect the position or policy of the Office of Education, and no official endorsement by the Office of Education should be inferred.

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INTRODUCTORY STATEMENT

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through five programs to achieve its objectives. The Academic Games program has developed simulation games for use in the classroom. It is evaluating the effects of games on student learning and studying how games can improve interpersonal relations in the schools. The Social Accounts program is examining how a student's education affects his actual occupational attainment, and how education results in different vocational outcomes for blacks and whites. The Talents and Competencies program is studying the effects of educational experience on a wide range of human talents, competencies, and personal dispositions in order to formulate--and research--important educational goals other than traditional academic achievement. The School Organization program is currently concerned with the effects of student participation in social and educational decision-making, the structure of competition and cooperation, formal reward systems, effects of school quality, and the development of information systems for secondary schools. The Careers and Curricula program bases its work upon a theory of career development. It has developed a self-administered vocational guidance device to promote vocational development and to foster satisfying curricular decisions for high school, college, and adult populations.

This report uses the Holland Occupational Classification to examine a representative sample of work histories. The analyses test the usefulness of the classification in ordering work histories and test the validity of selected hypotheses from Holland's theory of careers, from which the classification was derived.

The report was prepared by members of the Careers and Curricula and the Social Accounts programs. This cooperative effort illustrates how an R & D Center with its cluster of related programs coalesces over time, increases the quality of research, and produces practical findings at lower costs.

Acknowledgment

We wish to thank James S. Coleman, John H. Hollifield, James M. McPartland, and James M. Richards, Jr. for their skillful editorial help. We are also indebted to Mary Cowan Viernstein, Leslie Schnuelle and Ruth Narot for their assistance in processing these data.

Abstract

In this paper, the Holland Occupational Classification is applied to a national sample of retrospective work histories (N=973) in order to (a) test the predictive efficiency of the classification, and (b) test related hypotheses from Holland's theory of careers. Analyses were performed by organizing and reorganizing the work histories according to the classification.

The classification appears to order lower level occupational histories in an efficient way, well beyond chance. Also, all three letters in the Realistic code appear to have predictive validity. The testing of the hypotheses from the theory of careers suggests that the theory can be applied to both adult work histories and vocational choices of high school and college students.

Introduction

The scientific analysis of work histories poses numerous methodological, practical, and theoretical difficulties -- everything from the storage of massive amounts of data to the selection and development of a few useful strategies and analyses from the large number of alternatives. The purpose of this paper is to assess the usefulness of only one strategy -- the application of a theoretically-based occupational classification to a national sample of representative work histories. Because the classification was derived from a theory of careers and is an instrument of the theory, the application of the classification to work histories makes it possible to test both the usefulness of the classification in ordering work histories and the validity of selected hypotheses from the theory.

In this context, the application of the classification to the work histories has the following objectives:

a. to test the predictive efficiency of the classification

b. to test selected hypotheses from Holland's theory of careers -- those hypotheses concerned with occupational achievement and stability of career.

The occupational classification applied to the work histories has been proposed, tested, and revised by Holland and his colleagues (Holland, 1959, 1966a, 1966b; Holland, Whitney, Cole, and Richards, 1969; Holland, Viernstein, Kuo, Karweit, and Blum, 1970; Viernstein, 1971). The classification contains six main categories -- Realistic, Investigative, Artistic, Social, Enterprising, and Conventional -- and 68 subcategories within the

main categories, such as Realistic-Investigative-Enterprising, Realistic-Investigative-Social, etc. The classifications come from a theory of personality types and model environments (Holland, 1966a), and all occupational categories were derived from a single set of coordinating definitions -- six scale scores from the Vocational Preference Inventory (Holland, 1965). The development of the classification is described and documented in Holland et al (1970) and in Viernstein (1971).

Method

A national representative sample of retrospective work histories for men aged 30 to 39 in 1968 was obtained to develop a social accounting system. A supplementary sample of black households only was also obtained in order to create representative black and non-black samples. The samples, the data collection process, and the tape storage techniques have been summarized by Blum, Karweit, and Sorensen (1969). The present study used the national sample (N=973) from the Social Accounts program rather than the separate representative samples of blacks and whites. The national sample contains 87.5% whites[1] and 12.5% blacks.

The occupational classification in Holland et al (1970) was used to assign Holland codes (three-letter codes) to the census codes (three digit codes) for the jobs in each man's work history. A few revisions and exceptions were made: (a) military service was excluded from consideration, and (b) truck drivers were classified as RCE rather than CRE.

[1] Also includes small percentages of Indian, Mexican, Chinese, and Japanese men.

Results

The following analyses were usually performed by organizing and reorganizing work histories according to Holland's classification and then testing selected hypotheses from his theory of vocational beha ior (Holland, 1966).

Stability of Work Histories

The purpose of these analyses was to show that the classification organizes occupations into similar or homogeneous groups. If the classification performs this task well, men in the same occupational category should resemble one another in certain ways: (a) they should possess similar personal traits and talents, and (b) they should possess similar work histories or move among the same or similar occupational categories. In the following tables, it is assumed that the higher the predictive validity of the classification, the more likely the classification organizes work histories according to homogeneous groups.

To test this assumption, a man's first full-time job after full-time education and his job 5 and 10 years later were categorized into Holland's scheme. These simple analyses are shown in Tables 1 and 2. Because most jobs fall in the Realistic category (72.7%), only the Realistic category is subdivided according to three-letter codes or subgroups. The five remaining major categories have insufficient N to study their subgroups in a reliable way.

Insert Table 1

Table 1 shows that the category of a man's first job predicts the category of his job five years later with marked efficiency. When the six main categories are considered (the subcategories of Realistic are treated as one), 77.3% of the sample falls along the diagonal.

Because a standard chi-square test was not appropriate to use (Table 1 has many cells with low expected frequency), a mobility index (Rogoff, 1953) was calculated to obtain the total expected frequency for the cells on the diagonal. In this index, the expected frequency for each diagonal cell is calculated by multiplying the appropriate row by column totals and dividing by the total N. This expected frequency is 352 or 49.0% of the sample; whereas 77.3% is the observed percentage.

This finding is statistically significant and substantial for several reasons: (a) If job changes were simply uniform, only 1/6th or 16.7% would be expected in the diagonal. (b) The finding cannot be attributed to a large proportion of men failing to change jobs thereby producing a high hit rate (only 18.8 remain in the same occupation over 5 years). And finally (c) the observed percentage exceeds the base rate of any single category in the classification. For example, an efficient prediction can be made by predicting that everyone will be in the Realistic category. The observed percentage (77.3) exceeds this kind of prediction (63.9).

The application of these analyses to Table 2 produces similar results. The mobility index yields an expected percentage of 55.6, and the observed percentage of hits is 74.2, which exceeds the base-rate prediction (using the Realistic category) of 66.2.

Insert Table 2

To summarize, Tables 1 and 2 suggest that the first letter of a man's occupational code has moderate predictive validity.

To test the predictive validity of the 2nd and 3rd letters of the occupational classification, the data in tables 1 and 2 were reorganized for the large sample in the Realistic category only. Table 3 shows the predictive efficiency of the 2nd letter in the Holland code for intervals of 5 and 10 years. For 5 and 10 years the total % of hits equals 46.7 and 38.8. Chi-square analyses for the 4 x 4 tables within Table 3 are both statistically significant. (For a 5-year interval, d.f. = 9, x^2 = 105.12, $P < .001$; for a ten-year interval, d.f. = 9, x^2 = 71.03, $P < .001$).

Insert Tables 3 and 4

To test the predictive validity of the 3rd letter in the classification, Table 4 was prepared by selecting only the RI categories from Table 1, since only these categories contained both sufficient subjects and sufficient variation to make a statistical test worthwhile. Table 4 clearly reveals that the 3rd letter of the occupational code has predictive validity. The % hits for 5 and 10 years are 43.6 and 39.6. And 3 x 3 chi-square tests are statistically significant (for five years, x^2 = 70.19, d.f. 4, $P < .001$; and for 10 years, x^2 = 52.57, d.f. 4, $P < .001$).

Taken together, the results in Tables 1, 2, 3, and 4 imply that limited portions of a man's work history are orderly or predictable, that the classification is useful for showing the orderliness of work histories, and that all three letters of the occupational codes possess predictive validity.

The next step was to apply the classification to every job in each man's work history for his entire life -- from first full-time job to last job. Table 5 shows that the occupational classification orders all job transitions or changes in the same way that the classification orders the single job transitions in Tables 1-4. In Table 5, 4566 or 78.6% of the 5812 transitions for 757 men, are among the same major categories (R, I, A, S, E, or C). In contrast, the total expected frequency for the diagonal cells is 54.5 (E = r x c/n for each cell). This occurrence implies that work histories are typified by job movement within the same category.

In theoretical terms, a man's initial occupational code is a useful index of his personal disposition and talents. If a man's code has validity, then it should forecast his occupational movements. If the classification lacks the ability to group men and occupations according to their psychological similarity, the application of the classification would produce only random occupational patterns in these tables. In lay terms, the classification captures what everyone knows -- "people tend to keep doing the same kinds of things." The research task is to develop better schemes for explaining these regularities in occupational behavior.

Insert Table 5

Using only men in the Realistic category, the data in Table 1 were reorganized to learn if "consistent" Realistic codes (RI and RC) were more stable than "inconsistent" codes (RS and RE). Men with "consistent" codes are assumed to combine vocational interests, values, and competencies that are psychologically consistent or consonant. For instance, Realistic and Investigative are considered "consistent," because both types have an interest in things rather than people; and both lack interpersonal competency. In contrast, Realistic and Social are considered "inconsistent," because they represent divergent interests and competencies -- things versus people, and mechanical versus social competencies. Table 6 summarizes the results of these comparisons for 5 and 10 year intervals. Both the percentages for the five year interval (54.5 versus 39.4) and the percentages for the ten year interval (49.8 versus 29.8) are statistically significant ($P<.001$). The data suggest that men with consistent codes are more likely to have stable work histories in accordance with the theory (Holland, 1966, pp. 43-44).

Insert Table 6

Several additional analyses were performed to clarify the results in Table 6. Because the positive results may only reflect differences in expected frequencies of stability for "consistent" versus "inconsistent" men, the expected and observed frequencies for the subsamples of consistent and inconsistent men were calculated and tested for significance. For men with consistent codes over a 5 year interval, the observed percentage is significantly greater than the expected

percentage ($P < .05$); whereas the difference between observed and expected percentages for men with inconsistent codes is not significant. The same analyses for the ten-year interval reveal no significant differences between the expected and observed frequencies for either the consistent or the inconsistent samples. Therefore, the results in Table 6 cannot be attributed to differential rates of stability due to unusual sampling.

One final analysis was performed that appears to strengthen the hypothesis that men with consistent codes are more stable. Men with consistent codes tend to maintain a consistent code, for 64.7% have consistent codes (RI or RC) at the end of 5 years, and 62.7% have consistent codes at the end of 10 years. In contrast, men with inconsistent codes (RS or RE) are not only more unstable after 5 years (42.3%) but also this instability accelerates. Only 33.4% of the inconsistent men had RE or RS codes at the end of 10 years. This final analysis implies that inconsistency of a man's code may have a snowballing effect.

Controls

The effect of family resources and industry were partially explored to learn if these influences had a major effect upon the predictive validity of the classification. Many have argued persuasively for the need to consider the industry in which a man's occupation belongs, because industries differ in many ways and should affect a man's work history. Likewise, family resources are known to affect the level of a man's education and first and subsequent jobs (Coleman, Blum and Sorensen, 1970).

In the case of family resources it was assumed that the level of father's education is a useful index of son's occupational opportunities, because education is positively related to income and the resources income can obtain and use. For this analysis, the national sample was divided into two parts: (1) sons whose fathers had at least 9th grade education, and (2) sons whose fathers had less than a 9th grade education. The work histories for these samples with more and less paternal education were then analyzed exactly as in Table 1. The % of hits for 6 by 6 tables for men whose fathers had more education equaled 70.3% versus 79.1% for sons with fathers of less education. Because the percentage of hits depends upon the marginals, expected frequencies were calculated for each table. For fathers with more education, the observed percentage of 70.3 hits is 36.6% greater than the expected percentage. For fathers with less education, the observed percentage of 79.1% is only 24.8% greater than the expected. Consequently, we conclude that higher levels of paternal education lead to greater stability of son's jobs over a five year interval.

When the analysis in Table 5 is performed industry by industry (see Table 7) it is clear that the majority of job transitions occur where the occupational category and industrial classification intersect. This relationship can be seen by reviewing the findings for each industry shown in each row of Table 5. For example, most industries are included within the Realistic category -- mining, construction, manufacturing, etc.; the financial industry overlaps the Conventional category most and the Enterprising category to a lesser degree. The services industry overlaps the Realistic category most and the Social category somewhat less. These results suggest a marked association

between occupational categories and specific industries--that is the Holland categories usually incorporate industrial settings in expected ways.

Insert Table 7

Occupational Achievement

Several analyses were made to test hypotheses about level of occupational prestige, income, and education. These hypotheses were derived from the second statement of the theory (Holland, 1966, pp. 47-48). "The level of vocational aspiration is related to the personality types. Enterprising, Social, and Artistic types ... have higher aspirations; Conventional, Intellectual, and Realistic types tend to underrate themselves ... h gh educational aspirations will be positively associated with the model types in the following order: Intellectual, Social, Artistic, Conventional, Enterprising, and Realistic." These hypotheses were applied to the present data by assuming that occupational prestige and income were equivalent to the NORC prestige scale, and by assuming that educational achievement was equivalent to educational aspiration. In Table 8, line 1 indicates that the correlation (rho) between the observed

Insert Table 8

and expected rank of mean prestige, derived from the code of a man's job 5 and 10 years earlier, equals .517 and .612. For this analysis, the following a priori code order, ranging from high to low expected prestige, was derived from

the hypotheses about vocational aspiration cited above: ES, EA, EC, SE, SA, SI, SR, AS, AI, IS, IR, CE, CS, CI, CR, RE, RS, RA, RI, and RC. Line 2 shows the same analysis for all job transitions and prestige (rho = .638). In this instance, the average prestige levels for all occupational codes (transitions) has been correlated with the expected level of prestige. Line 3 shows the identical analysis except that average income is predicted (rho = .499). Line 5 shows that the correlation between the average educational level and the expected ordering of occupational codes (IS, IR, SI, SA, SC, SE, SR, AI, AS, AE, CI, CS, CE, CR, ES, EA, EC, RI, RS, RA, RC, and RE), derived from the hypothesis about educational aspiration, is .637.

These results strongly suggest that prestige of a man's job, his income and his level of education can be predicted from the Holland codes of his first full-time job or from the transitions in his work history. At the same time, the use of rho based on means inflates the size of the correlations so that the true correlations are somewhat lower than those in Table 8.

Other correlational analysis (product-moment) reveals that the correlation between the "consistency" of occupational codes (Holland, 1966, p. 44) for all jobs and average prestige level is .503. When a three level estimate of consistency, derived from more recent work (Holland et al, 1969) is applied to the data the correlation increases only slightly (r = .539).

Discussion

One main limitation should be remembered. The size of the sample is too small to make diagnostic evaluations of subcategories within

the major categories. Only large scale studies will clearly test the efficacy of all categories in the classification.

The present study is only the second time the Holland classification has been tested with a representative, national sample of adult males. The results imply that the classification orders lower level occupational histories (most jobs in a representative sample are in the Realistic category containing skilled and unskilled jobs) in an efficient way -- well beyond chance. In addition, all three letters in the Realistic codes appear to have predictive validity. This finding is especially important since Realistic occupations make up the majority of occupations. In principle, the subcategories can be extended from three to six letters, but only three are currently used. In well-educated populations, the Realistic category is very small and the remaining categories are relatively large. The flexibility of the classification makes it possible to cope with both representative and unrepresentative populations. Equally important, the hypothetical predictions about vocational achievement suggest that the theory can be applied to work histories as well as vocational choices of high school and college students.

The positive results of the present study are consistent with other studies which have used the classification. Parsons (1971) has recently shown that the application of the classification to the work histories of a representative, national sample of older men (N=5000), aged 45-59, also produces moderately efficient predictions. Holland and Whitney (1968) applied the classification to longitudinal data and obtained unusually efficient predictions of the vocational aspirations of college students over an 8- to 12-month interval. For example, 79% of the men (N=1359)

and 93% of the women (N=1386) reported successive vocational choices that were categorized as the same or related. In a recent study of college graduates, Lucy (1971) found statistically significant and strong positive relationships between the category of a student's major field and the category of his current occupation using the Holland classification. Contingency coefficients for 6 x 6 tables range from .64 for a 25-year interval to .74 for a 15-year interval.

The practical implications seem clear. Users of the classification have additional evidence that the classification is probably applicable and valid for a broad range of occupations. At the same time, more evidence is needed about individual occupations so that their classification can become more precise.

The classification is also a tool for studying occupational mobility according to the kinds of interests, values, and special competencies that different kinds of jobs require. The use of the classification, in conjunction with prestige or occupational level measures, may be helpful in clarifying some problems of mobility. For example, mobility studies should be concerned with a person's opportunity to maximize his talents and interests as well as his opportunity to reach higher levels of income. From this perspective, poor people suffer from both the effects of low income and the effects of a narrow range of job opportunities. If job opportunities are limited to only a few kinds, then only a few kinds of talent can find expression, and the range of possible gratifications from work will also be limited.

Finally, the classification can be used in vocational education, vocational guidance, personnel work, and in research as a tool to organize

occupational data, to develop curricular clusters, to organize career libraries, to interpret work histories, and to facilitate the guidance, selection, or placement of students or employees. Because the classification is based upon a theory which has some positive empirical support, any occupational data which can be reorganized by the classification can be interpreted with the aid of the theory.

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Footnote for Table 1

Note. This table and succeeding tables use all available data. The differences in N from table to table occur because of missing information only. The "other" category includes military service, unemployed, unknown, etc. and is not included in the total N. In addition, large sample losses occur because many men had either not held a full time job for five or ten years (Tables 1 and 2) since their last full time education at the time of interview.

Table 1

Relation of Category of First Job to Category of Job 5 Years Later

First Job Category	Occupational Category 5 Years Later																
	RIS	RIE	RIC	RSI	RSE	RSC	REI	RES	RCI	RCS	RCE	Inv	Art	Soc	Ent	Conv	Other	Total
RIS	8	3	2		1			1		2	1	2	1	2	2		8	25
RIE	4	65	13	1	15		2	1		1	10	8	1	3	10	1	27	135
RIC	2	10	23	1	7	1	1		1		1			2	6	5	11	60
RSI				2														2
RSE	5	28	31		104	2	2	2	3	6	26	4	1	5	19	13	77	251
RSC		3			1	1									2		1	7
REI		1	1		1						1	2			3			9
RES		1	2		3			2		1	1		1		3	1	6	15
RCI	2	2	2		3			1	3			1	1				2	15
RCS		1	1		1					4					1		2	8
RCE		1	2		7		1				8			1	1	2	8	23
Inv	1	3	1		1		1		1			31	1	1	2	1	7	44
Art	1												2				4	3
Soc		1			1							2		34	3	3	11	44
Ent	2	6	1	1	2		1					3			43	2	14	61
Conv	2	5	2		5							1	1	3	7	29	7	55
Other			1		1										1		28	3
Total	27	130	81	5	152	4	8	7	8	14	48	54	9	51	102	57		757

Table 2

Relation of Category of First Job to Category of Job 10 Years Later

First Job Category	Occupational Category 10 Years Later																	
	RIS	RIE	RIC	RSI	RSE	RSC	REI	RES	RCI	RCS	RCE	Inv	Art	Soc	Ent	Conv	Other	Total
RIS	6	4	4		2				1	1		3		2	3		7	26
RIE	4	58	11	1	14		2	2	4	1	5	7	6	3	15	1	28	134
RIC	1	9	22	1	6	1			1	1	2	1	1	1	5	5	14	57
RSI				1											1			2
RSE	9	60	33	2	89		7	4	6	12	24	6	1	4	25	10	36	292
RSC		2			1						1				1		3	5
REI		2	2		1							1			2		1	8
RES		4	1				1	3		1	1	1	1	1	4	1	2	19
RCI		3	3		1			1	2			1	1		1		4	13
RCS		1			1					4	1				2		1	9
RCE	2	4	4		5		1		1		6				4	1	3	28
Inv	1	1	1		1				1			15	2	1	5		23	28
Art															2		5	2
Soc				1			1				1	1		12	3	1	35	20
Ent		6			1		1			1		3		2	42	5	14	61
Conv		3	1		4							2		7	12	16	17	45
Other		2	2		1				1			1		1	1		22	9
Total	23	157	82	6	126	1	13	10	16	21	41	41	12	33	127	40		749

Table 3

Predictive Value of 2nd Letter in Classification Code for Realistic Occupations Only

	Occupational Category 5 Years Later					
	RI-	RS-	RE-	RC-	Other	Total
RI-	130	26	5	16	43	220
RS-	67	110	4	35	44	260
RE-	5	4	2	3	10	24
RC-	11	11	2	15	7	46
	Occupational Category 10 Years Later					
RI-	119	25	4	16	53	217
RS-	104	93	11	43	48	299
RE-	9	1	4	2	11	27
RC-	17	7	2	14	10	50

Table 4

Predictive Value of 3rd Letter in Classification Code for Codes of RI- Only

	RIS	RIE	RIC	Other	Total
Occupational Category 5 Years Later					
RIS	8	3	2	12	25
RIE	4	65	13	53	135
RIC	2	10	23	25	60
Occupational Category 10 Years Later					
RIS	6	4	4	12	26
RIE	4	58	11	61	134
RIC	1	9	22	25	57

Table 5

The Application of the Classification to All Job Transitions

	RIS	RIE	RIC	RSI	RSE	RSC	REI	RES	RCI	RCS	RCE	I	A	S	E	C	Other	Total
RIS	84	50	13		37	1	3	3	2	5	11	3		20	26	6	33	264
RIE	32	452	61	6	167	3	22	8	17	9	50	42	13	15	51	18	194	966
RIC	25	57	166	4	87		8	3	6	4	30	19	2	19	26	13	90	469
RSI		4		12	2		1							2	5	1	4	27
RSE	42	247	122	1	1029	10	20	17	26	27	107	16	6	46	80	54	300	1850
RSC	5	2	1		16	9		1			1	1		2	2	3	9	43
REI	5	15	3	2	10		17	1	2	1	3	3		1	10	4	12	77
RES	2	11	6		15	1		16	2	1	1	1		1	15	9	19	81
RCI	4	16	5	1	13	1	1	1	48	2	2	6	2	4	6	1	16	113
RCS	3	5	6		13	2		1		18	4	3	1		2	3	11	61
RCE	7	39	29		85		5	4	4	1	148	4		3	15	11	60	355
I	5	21	8		9			1	4	2	2	143	2	10	24	4	24	235
A	1	6	1		3						2	2	31	3	6		2	55
S	13	13	9	2	32		2	1	2	1	4	14	1	173	23	12	19	302
E	17	38	21	6	49	1	2	8	6		11	17	3	22	381	24	64	606
C	3	27	15	1	32		5	4	4		8	7	5	13	56	128	60	308
Other	43	221	129	5	244	11	23	20	11	16	58	38	6	23	80	69	241	997
Total	248	1003	466	35	1599	28	86	69	123	71	384	281	66	334	728	291		5812

Table 6

Consistency of Code of First Full-time Job and Occupational Stability

Code of First Full-time Job	% Remaining in Same Category	
	5 Years	10 Years
Consistent Codes (RI's and RC's)	54.5	49.8
Inconsistent Codes (RS's and RE's)	39.4	29.8

Table 7

Relation of Industry to Movement
Among Holland Categories

	Real	Inv	Art	Soc	Ent	Conv	Total
MINING (1)	90.2 (248)	2.1 (19)	.3 (3)	.7 (7)	4.9 (45)	1.4 (14)	100
CONSTRUCTION (2)	79.2 (952)	9.6 (119)	.5 (8)	.2 (3)	5.0 (62)	4.3 (55)	100
MANUFACTURING (3-4)	79.1 (526)	2.7 (18)	1.5 (10)	1.0 (7)	10.5 (70)	4.8 (32)	100
TRANSPORTATION (5)	74.9 (351)	5.3 (25)		3.3 (16)	3.4 (16)	12.6 (60)	100
TRADE (WHOLE, RETAIL) (6)	54.8 (502)	.6 (6)	.5 (5)	1.5 (14)	3.4 (350)	12.6 (37)	100
FINANCE (7)	9.0 (18)	1.0 (2)	3.0 (1)	2.0 (4)	61.4 (121)	25.8 (51)	100
SERVICES (8)	45.2 (114)	7.0 (2)	5.5 (14)	30.5 (178)	7.7 (45)	2.9 (18)	100
PUBLIC ADMINISTRATION (9)	55.2 (114)	14.0 (29)	.9 (2)	6.5 (14)	4.7 (10)	17.8 (37)	100
AGRICULTURE (0)	99.0 (580)						

Note: Based on all transitions. %'s equal percentage of hits, or % of transitions that occur within a single main category.

Table 8

Predicting Occupational Prestige, Income and Educational Level from the Holland Codes of a Man's Job

	Holland Occupational Codes	rho
1.	Prestige (Job 5 Years Later)	.517
	(Job 10 Years Later)	.612
2.	Prestige (All Transitions)	.638
3.	Income (All Transitions)	.499
4.	Education (All Transitions)	.637